



## RAW SEQUENCE LISTING

DATE: 06/26/2002

PATENT APPLICATION: US/10/055,713

TIME: 09:55:36

Input Set : A:\seqlist.txt

Output Set: N:\CRF3\06262002\J055713.raw

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3 <110> APPLICANT: JAMIESON, Andrew
4 LI, Guofu
6 <120> TITLE OF INVENTION: ZINC FINGER PROTEINS FOR DNA BINDING AND GENE
7 REGULATION IN PLANTS
9 <130> FILE REFERENCE: 8325-0026 / S26-US1
11 <140> CURRENT APPLICATION NUMBER: 10/055,713
C--> 12 <141> CURRENT FILING DATE: 2002-06-17
14 <150> PRIOR APPLICATION NUMBER: 60/263,445
15 <151> PRIOR FILING DATE: 2001-01-22
17 <150> PRIOR APPLICATION NUMBER: 60/290,716
18 <151> PRIOR FILING DATE: 2001-05-11
20 <160> NUMBER OF SEQ ID NOS: 105
22 <170> SOFTWARE: PatentIn Ver. 2.0
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 25
26 <212> TYPE: PRT
27 <213> ORGANISM: Artificial Sequence
29 <220> FEATURE:
30 <223> OTHER INFORMATION: Description of Artificial Sequence: C2H2 zinc finger domain
32 <220> FEATURE:
33 <221> NAME/KEY: SITE
34 <222> LOCATION: (2)..(5)
35 <223> OTHER INFORMATION: Xaa = any amino acid
37 <220> FEATURE:
38 <221> NAME/KEY: SITE
39 <222> LOCATION: (4)..(5)
40 <223> OTHER INFORMATION: where Xaa may be present or absent
42 <220> FEATURE:
43 <221> NAME/KEY: SITE
44 <222> LOCATION: (7)..(18)
45 <223> OTHER INFORMATION: Xaa = any amino acid
47 <220> FEATURE:
48 <221> NAME/KEY: SITE
49 <222> LOCATION: (20)..(24)
50 <223> OTHER INFORMATION: Xaa = any amino acid
52 <220> FEATURE:
53 <221> NAME/KEY: SITE
54 <222> LOCATION: (23)..(24)
55 <223> OTHER INFORMATION: where Xaa may be present or absent
57 <400> SEQUENCE: 1
W--> 58 Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
59 1 5 10 15
W--> 61 Xaa Xaa His Xaa Xaa Xaa Xaa Xaa His

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62          20          25
65 <210> SEQ ID NO: 2
66 <211> LENGTH: 9
67 <212> TYPE: DNA
68 <213> ORGANISM: Artificial Sequence
70 <220> FEATURE:
71 <223> OTHER INFORMATION: Description of Artificial Sequence: target sequence
73 <400> SEQUENCE: 2
74 ggcgtagac 9
76 <210> SEQ ID NO: 3
77 <211> LENGTH: 9
78 <212> TYPE: DNA
79 <213> ORGANISM: Artificial Sequence
81 <220> FEATURE:
82 <223> OTHER INFORMATION: Description of Artificial Sequence: target segment
84 <400> SEQUENCE: 3
85 ggcgcacgta 9
87 <210> SEQ ID NO: 4
88 <211> LENGTH: 23
89 <212> TYPE: DNA
90 <213> ORGANISM: Artificial Sequence
92 <220> FEATURE:
93 <223> OTHER INFORMATION: Description of Artificial Sequence: target sequence for
94 2 linked ZFPs
96 <220> FEATURE:
97 <221> NAME/KEY: misc_feature
98 <222> LOCATION: (1)..(23)
99 <223> OTHER INFORMATION: n = a, c, g or t
101 <220> FEATURE:
102 <221> NAME/KEY: misc_feature
103 <222> LOCATION: (1)..(3)
104 <223> OTHER INFORMATION: 3rd finger of a 2nd ZFP
106 <220> FEATURE:
107 <221> NAME/KEY: misc_feature
108 <222> LOCATION: (4)..(6)
109 <223> OTHER INFORMATION: 2nd finger of a 2nd ZFP
111 <220> FEATURE:
112 <221> NAME/KEY: misc_feature
113 <222> LOCATION: (7)..(9)
114 <223> OTHER INFORMATION: 1st finger of a 2nd ZFP
116 <220> FEATURE:
117 <221> NAME/KEY: misc_feature
118 <222> LOCATION: (10)..(14)
119 <223> OTHER INFORMATION: n may be present or absent
121 <220> FEATURE:
122 <221> NAME/KEY: misc_feature
123 <222> LOCATION: (15)..(17)
124 <223> OTHER INFORMATION: 3rd finger of a 1st ZFP
126 <220> FEATURE:

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127 <221> NAME/KEY: misc\_feature  
 128 <222> LOCATION: (18)..(20)  
 129 <223> OTHER INFORMATION: 2nd finger of a 1st ZFP  
 131 <220> FEATURE:  
 132 <221> NAME/KEY: misc\_feature  
 133 <222> LOCATION: (21)..(23)  
 134 <223> OTHER INFORMATION: 1st finger of a 1st ZFP  
 136 <400> SEQUENCE: 4  
 137 nnnnnnnnnnnn nnnnnnnnnnnn nnn 23  
 139 <210> SEQ ID NO: 5  
 140 <211> LENGTH: 5  
 141 <212> TYPE: PRT  
 142 <213> ORGANISM: Artificial Sequence  
 144 <220> FEATURE:  
 145 <223> OTHER INFORMATION: Description of Artificial Sequence: peptide ZFP linker  
 147 <400> SEQUENCE: 5  
 148 Thr Gly Glu Lys Pro  
 149 1 5  
 152 <210> SEQ ID NO: 6  
 153 <211> LENGTH: 5  
 154 <212> TYPE: PRT  
 155 <213> ORGANISM: Artificial Sequence  
 157 <220> FEATURE:  
 158 <223> OTHER INFORMATION: Description of Artificial Sequence: peptide ZFP linker  
 160 <400> SEQUENCE: 6  
 161 Gly Gly Gly Gly Ser  
 162 1 5  
 165 <210> SEQ ID NO: 7  
 166 <211> LENGTH: 8  
 167 <212> TYPE: PRT  
 168 <213> ORGANISM: Artificial Sequence  
 170 <220> FEATURE:  
 171 <223> OTHER INFORMATION: Description of Artificial Sequence: peptide ZFP linker  
 173 <400> SEQUENCE: 7  
 174 Gly Gly Arg Arg Gly Gly Gly Ser  
 175 1 5  
 178 <210> SEQ ID NO: 8  
 179 <211> LENGTH: 9  
 180 <212> TYPE: PRT  
 181 <213> ORGANISM: Artificial Sequence  
 183 <220> FEATURE:  
 184 <223> OTHER INFORMATION: Description of Artificial Sequence: peptide ZFP linker  
 186 <400> SEQUENCE: 8  
 187 Leu Arg Gln Arg Asp Gly Glu Arg Pro  
 188 1 5  
 191 <210> SEQ ID NO: 9  
 192 <211> LENGTH: 12  
 193 <212> TYPE: PRT  
 194 <213> ORGANISM: Artificial Sequence

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196 <220> FEATURE:  
 197 <223> OTHER INFORMATION: Description of Artificial Sequence: peptide ZFP linker  
 199 <400> SEQUENCE: 9  
 200 Leu Arg Gln Lys Asp Gly Gly Gly Ser Glu Arg Pro  
 201 1 5 10  
 204 <210> SEQ ID NO: 10  
 205 <211> LENGTH: 16  
 206 <212> TYPE: PRT  
 207 <213> ORGANISM: Artificial Sequence  
 209 <220> FEATURE:  
 210 <223> OTHER INFORMATION: Description of Artificial Sequence: peptide ZFP linker  
 212 <400> SEQUENCE: 10  
 213 Leu Arg Gln Lys Asp Gly Gly Gly Ser Gly Gly Gly Ser Glu Arg Pro  
 214 1 5 10 15  
 217 <210> SEQ ID NO: 11  
 218 <211> LENGTH: 28  
 219 <212> TYPE: PRT  
 220 <213> ORGANISM: Artificial Sequence  
 222 <220> FEATURE:  
 223 <223> OTHER INFORMATION: Description of Artificial Sequence: SP-1 consensus ZFP  
 224 recognition helix  
 226 <220> FEATURE:  
 227 <221> NAME/KEY: SITE  
 228 <222> LOCATION: (12)..(18)  
 229 <223> OTHER INFORMATION: Xaa = any amino acid  
 231 <400> SEQUENCE: 11  
 232 Tyr Lys Cys Pro Glu Cys Gly Lys Ser Phe Ser Xaa Xaa Xaa Xaa Xaa  
 233 1 5 10 15  
 235 Xaa Xaa His Gln Arg Thr His Thr Gly Glu Lys Pro  
 236 20 25  
 239 <210> SEQ ID NO: 12  
 240 <211> LENGTH: 34  
 241 <212> TYPE: PRT  
 242 <213> ORGANISM: Artificial Sequence  
 244 <220> FEATURE:  
 245 <223> OTHER INFORMATION: Description of Artificial Sequence: backbone F1  
 247 <220> FEATURE:  
 248 <221> NAME/KEY: SITE  
 249 <222> LOCATION: (18)..(24)  
 250 <223> OTHER INFORMATION: Xaa = any amino acid  
 252 <400> SEQUENCE: 12  
 253 Lys Lys Lys Ser Lys Gly His Glu Cys Pro Ile Cys Phe Arg Val Phe  
 254 1 5 10 15  
 256 Lys Xaa Xaa Xaa Xaa Xaa Xaa Xaa His Lys Arg Ser His Thr Gly Glu  
 257 20 25 30  
 259 Lys Pro  
 263 <210> SEQ ID NO: 13  
 264 <211> LENGTH: 28  
 265 <212> TYPE: PRT

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Input Set : A:\seqlist.txt

Output Set: N:\CRF3\06262002\J055713.raw

266 <213> ORGANISM: Artificial Sequence  
 268 <220> FEATURE:  
 269 <223> OTHER INFORMATION: Description of Artificial Sequence: backbone F2  
 271 <220> FEATURE:  
 272 <221> NAME/KEY: SITE  
 273 <222> LOCATION: (12)..(18)  
 274 <223> OTHER INFORMATION: Xaa = any amino acid  
 276 <400> SEQUENCE: 13  
 Wt--> 277 Tyr Lys Cys Thr Val Cys Gly Lys Ser Phe Ser Xaa Xaa Xaa Xaa Xaa  
 278 1 5 10 15  
 Wt--> 280 Xaa Xaa His Lys Arg Leu His Thr Gly Glu Lys Pro  
 281 20 25  
 284 <210> SEQ ID NO: 14  
 285 <211> LENGTH: 23  
 286 <212> TYPE: PRT  
 287 <213> ORGANISM: Artificial Sequence  
 289 <220> FEATURE:  
 290 <223> OTHER INFORMATION: Description of Artificial Sequence: backbone F3  
 292 <220> FEATURE:  
 293 <221> NAME/KEY: SITE  
 294 <222> LOCATION: (12)..(18)  
 295 <223> OTHER INFORMATION: Xaa = any amino acid  
 297 <400> SEQUENCE: 14  
 Wt--> 298 Phe Ser Cys Asn Tyr Cys Gln Arg Lys Phe Tyr Xaa Xaa Xaa Xaa Xaa  
 299 1 5 10 15  
 Wt--> 301 Xaa Xaa His Val Arg Ile His  
 302 20  
 305 <210> SEQ ID NO: 15  
 306 <211> LENGTH: 4  
 307 <212> TYPE: PRT  
 308 <213> ORGANISM: Artificial Sequence  
 310 <220> FEATURE:  
 311 <223> OTHER INFORMATION: Description of Artificial Sequence: modified F1  
 313 <400> SEQUENCE: 15  
 314 Gln Asn Lys Lys  
 315 1  
 318 <210> SEQ ID NO: 16  
 319 <211> LENGTH: 5  
 320 <212> TYPE: PRT  
 321 <213> ORGANISM: Artificial Sequence  
 323 <220> FEATURE:  
 324 <223> OTHER INFORMATION: Description of Artificial Sequence: helix-capping sequence  
 326 <220> FEATURE:  
 327 <221> NAME/KEY: SITE  
 328 <222> LOCATION: (4)  
 329 <223> OTHER INFORMATION: Xaa = either Lys or Arg  
 331 <220> FEATURE:  
 332 <221> NAME/KEY: SITE  
 333 <222> LOCATION: (5)

RAW SEQUENCE LISTING ERROR SUMMARY  
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 2,3,4,5,7,8,9,10,11,12,13,14,15,16,17,18,20,21,22,23,24  
Seq#:4; N Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23  
Seq#:11; Xaa Pos. 12,13,14,15,16,17,18  
Seq#:12; Xaa Pos. 18,19,20,21,22,23,24  
Seq#:13; Xaa Pos. 12,13,14,15,16,17,18  
Seq#:14; Xaa Pos. 12,13,14,15,16,17,18  
Seq#:16; Xaa Pos. 4,5  
Seq#:17; Xaa Pos. 16,17,18,19,20,21,22  
Seq#:18; Xaa Pos. 12,13,14,15,16,17,18  
Seq#:19; Xaa Pos. 12,13,14,15,16,17,18  
Seq#:20; N Pos. 25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44  
Seq#:20; N Pos. 45  
Seq#:21; N Pos. 25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44  
Seq#:21; N Pos. 45  
Seq#:22; N Pos. 28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47  
Seq#:22; N Pos. 48